



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND
TOXIC SUBSTANCES

Memorandum

SUBJECT: Responses to Questions Concerning Disulfoton Posed by Special Review and Reregistration Division

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Introduction

A meeting was held on November 28, 2001 between Special Review and Reregistration Division (SRRD) and BEAD concerning disulfoton. This memo addresses questions posed by SRRD during the meeting. The questions ranged from general information to help SRRD complete the IRED to verifying concerns from growers. This memo contains proprietary data and is for OPP use only.

Questions And Answers

1. The Pacific Northwest (PNW) primarily uses the liquid formulation of disulfoton on potatoes. Is the granular product needed for use outside the PNW?

Granular disulfoton (15G), like the liquid (8EC), is used at a relatively low level nationwide. However, more crop area (nationwide) is treated with granular than with liquid, according to Doane's data. In 2000, about 11,000 acres

were treated with 15G, 8,000 with 8EC. This is equivalent to about 1% of the 2000 crop treated with 15G, as compared to about 0.6 % treated with 8EC. Some extension services still list granular disulfoton as a pest control option, which is presumably followed by growers in their regions. These include: Texas, North Dakota, New York, Delaware, and Colorado - all states outside the PNW. Taken together, these results suggest greater reliance on granular disulfoton in potato production outside the PNW. However, since granular disulfoton is used on less than 2% of the national potato crop, its use may reasonably be characterized as somewhat low.

2. *There was an SLN in 1992 for North Carolina peanuts. Where is disulfoton on peanuts used? What are the formulations and the target pests?*

Only the granular formulation of disulfoton is registered for use on peanuts. There is a Section 3 label for nationwide use on this crop. However, North Carolina has a 24(c) label that allows two applications per season instead of the single application allowed elsewhere. Thrips are the main targeted pest, though in some areas (e.g., Texas), aphids are also listed as targets (USDA Crop Profile) of peanuts. The main thrips species involved is the tobacco thrips, *Frankliniella fusca*. Doane's data indicate usage in peanuts in the following states in 2000: Alabama, Georgia, North Carolina, and Oklahoma.

3. *Is it reasonable to narrow the scope of the 15G label to gladiolus in Florida, deciduous (birch) trees in New England and New York state? How narrowly can EPA define the use of disulfoton on ornamentals?*

Unknown. The ornamental industry is quite varied, not only because there are well over 600 species of plants grown commercially, but there is little common practice among nursery and floriculture producers. We do know that of the 4,000 operations that responded to the NASS survey for Nursery and Floriculture Chemical Usage (to be published Dec. 2001 or Jan. 2002), only 22 operations reported using disulfoton on a total of 56 applications (about 0.1% of reported pesticide applications). With such low reporting NASS will probably not conduct much analyses with this chemical.

BEAD has not been able to verify the American Nursery and Landscape Association's claim that disulfoton is critical to the industry and rate reductions below 13 lbs ai/A will cause significant harm to the nursery industry. Based on NASS information stated above, disulfoton does not appear to be critical to the industry. The California Department of Pesticide Regulation (CA DPR, years 1997-1999) database does not have any record of use above 6 lbs ai/A. There are a couple of growers of birch trees in NY that do use disulfoton at the 13 lbs ai/A rate, but they offered no evidence why such a rate is necessary. At this time, BEAD believes the critical need of disulfoton to be low.

4. *How much disulfoton is used on lettuce and cole crops in California, specifically the Salinas Valley, vs. the rest of the country? Where and how much of the granular formulation of disulfoton is used for cole crops and peppers? If there is no use of the granular, does it make sense to cancel?*

The table below examines the amount of disulfoton that has been used on the selected vegetables in CA. Salinas Valley encompasses Monterey, San Benito, Santa Clara and Santa Cruz Counties. Since Monterey County is the largest production area it is the subject of the table.

Site	Pounds of Disulfoton applied to the Site in CA (3 yr Average: 1997-1999) ¹	% of the CA Disulfoton used by Site in Monterey Co., CA
Broccoli	8617	60
Brussels Sprouts	394	87
Cabbage ²	3117	<1
Cauliflower	1114	52

Lettuce, head	8883	59
Lettuce, leaf	2377	57

¹ Data from the CA DPR database and includes years 1997-1999.

² Ventura Co, not part of Salinas Valley, is maximum user of disulfoton in CA, 3 yr average of 83% of disulfoton applied to cabbage.

Also, from the CA DPR database (years 1997-1999), an average of 85,617 lbs of disulfoton was applied to 36 crops, about 29% of which was applied in Salinas Valley. The majority of disulfoton was applied to asparagus (about 45%), of which less than 10% is grown in Salinas Valley, CA.

USDA NASS Agriculture Chemical Usage Vegetable Summary 2000 has limited information. The low number of reports of disulfoton are probably because the usage is low on vegetable crops other than asparagus.

Broccoli Production: CA, AZ, TX; with 6% of CA broccoli treated with disulfoton (7,200 lbs).

Cabbage Production: CA, NY, TX, NC; with all states reporting some use. Only 3% of total cabbage produced was treated with a total of 3,400 lbs disulfoton nationwide.

Cauliflower Production: CA, AZ, NY; no reported use in AZ or NY.

Lettuce Production: CA, AZ; no reported use in AZ.

Bell Peppers: CA, FL, NC, GA; no reported use in FL, NC, or GA.

About 85-87% of disulfoton is applied as the liquid formulation on asparagus, broccoli, cabbage, cauliflower, lettuce, and peppers, both nationally and in California. If EPA cancels the granular formulation of disulfoton on these crops the smaller growers would bear the economic impact, either by investing in new application equipment, by hiring commercial applicators, or not growing the crop.